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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (canceled)

Claim 2 (currently amended): The microelectronic structure according to claim ~~[[1]]~~24, wherein:

said at least one opening completely penetrates said insulating material; and

at least one conductive material fills said at least one opening.

Claim 3 (canceled)

Claim 4 (currently amended): The microelectronic structure according to claim ~~[[1]]~~24, wherein said insulating material is composed of one of silicon nitride and silicon oxide.

Claims 5-9 (canceled)

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Claim 10 (currently amended): The microelectronic structure according to claim ~~1~~24, including a metal-containing electrode layer covering said oxygen barrier layer.

Claim 11 (canceled)

Claim 12 (previously presented): The microelectronic structure according to claim 2, wherein:

said at least one conductive material is disposed in said at least one opening.

Claim 13 (canceled)

Claim 14 (currently amended): The microelectronic structure according to claim ~~1~~24, wherein said metal silicide layer contains at least one silicide selected from the group consisting of yttrium silicide, titanium silicide, zirconium silicide, hafnium silicide, vanadium silicide, niobium silicide, chromium silicide, iron silicide, cobalt silicide, palladium silicide, platinum silicide and copper silicide.

Claim 15 (original): The microelectronic structure according to Claim 10, including a metal-oxide containing layer covering said metal-containing electrode layer, said metal-oxide

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containing layer being a layer selected from the group consisting of a dielectric metal-oxide-containing layer, a ferroelectric metal-oxide-containing layer and a paraelectric metal-oxide-containing layer.

Claim 16 (currently amended): The microelectronic structure according to claim ~~[[4]]~~24, further comprising a noble metal layer disposed on said barrier layer.

Claims 17-23 (canceled)

Claim 24 (new): A microelectronic structure, comprising:

a base substrate at least partially composed of an insulating material and formed with at least one opening;

a metal silicide layer disposed on said base substrate in said opening;

an adhesion layer disposed on said base substrate above and outside of said opening in direct contact with said metal silicide layer, said adhesion layer containing at least one material selected from the group consisting of zirconium, hafnium, cerium, vanadium, chromium, and niobium;

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a barrier layer including an oxygen-containing iridium layer and an oxygen barrier layer, said oxygen barrier layer being composed of one of iridium dioxide and ruthenium dioxide; and

at least one layer of said barrier layer being provided over said adhesion layer and in direct contact with said adhesion layer, such that at least a portion of said adhesion layer is located directly between said metal silicide layer disposed in said opening and said at least one layer of said barrier layer, thus forming a layer stack of said metal silicide layer, said adhesion layer and said at least one layer of said barrier layer.